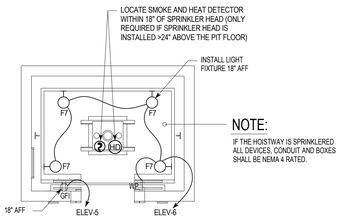
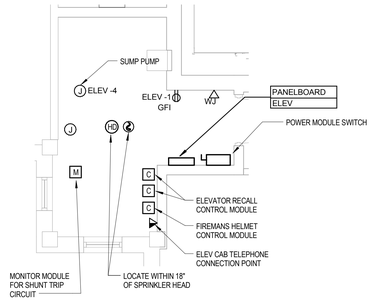
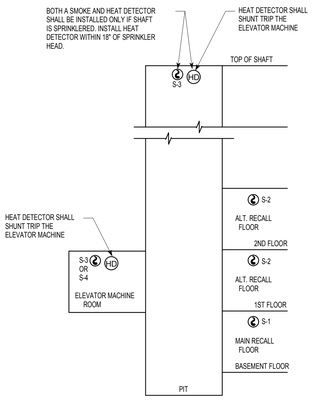


NOTE:
IF THE HOISTWAY IS SPRINKLERED ALL DEVICES, CONDUIT AND BOXES SHALL BE NEMA 4 RATED.

1 E601 ELEVATOR PIT DETAIL
SCALE: 1/4"=1'-0"



2 E601 TYPICAL ELEVATOR MACHINE ROOM LAYOUT DETAIL
SCALE: 1/4"=1'-0"



3 E601 SMOKE/HEAT DETECTOR ELEVATOR INTERFACE DETAIL
SCALE: 1/4"=1'-0"

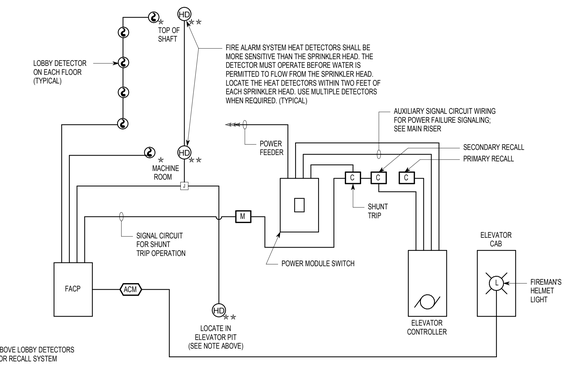
SMOKE DETECTOR ZONE RECALL

S-1 RECALLS ELEVATOR TO THE ALTERNATE FLOOR.

S-2 RECALLS ELEVATOR TO MAIN FLOOR.

S-3 RECALLS ELEVATOR TO MAIN FLOOR AND FLASHES FIREMAN'S HELMET IN CAB.

S-4 RECALLS ELEVATOR TO ALTERNATE FLOOR AND FLASHES FIREMAN'S HELMET IN CAB. (ONLY USED IF THE MACHINE ROOM IS ON THE MAIN FLOOR AND NO FIRE DOORS SEPARATE IT FROM THE MAIN LANDING)



★ OPERATION OF ANY OF THE ABOVE LOBBY DETECTORS SHALL OPERATE THE ELEVATOR RECALL SYSTEM

★★ OPERATION OF THE HEAT DETECTORS SHALL OPERATE THE FIRE ALARM SYSTEM AND SIGNAL THE SHUNT TRIP BREAKER TO DISCONNECT POWER TO THE ELEVATOR. THE FACP SHALL BE PROGRAMMED ACCORDINGLY AND SHALL INCLUDE ANY REQUIRED AUXILIARY RELAYS, POWER, ETC.

4 E601 ELEVATOR WIRING DETAIL
NO SCALE SCHEMATIC ONLY PRESENTATION

SPRINKLERED HOISTWAY/MACHINE ROOM/MACHINERY SPACE REQUIREMENTS:

IN ADDITION TO THE GENERAL REQUIREMENTS LISTED ABOVE, THE E.C. SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED AS OUTLINED BELOW FOR HOISTWAY/MACHINE ROOM/MACHINERY SPACE(S) THAT ARE SPRINKLERED PER NEC ARTICLE 620, ASME A17.1 ELEVATOR CODE, NFPA 72 & ALL APPLICABLE FEDERAL, STATE & LOCAL CODES. ELECTRICAL DEVICE & EQUIPMENT LOCATIONS & REQUIREMENTS SHALL BE VERIFIED WITH THE ELEVATOR EQUIPMENT MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN OR PLACING FINAL PURCHASE ORDERS FOR ANY ELECTRICAL DEVICES, EQUIPMENT, ETC.

A FIRE ALARM SYSTEM SMOKE DETECTOR & A FIRE ALARM SYSTEM HEAT DETECTOR SHALL BE LOCATED WITHIN TWO FEET OF EACH SPRINKLER HEAD. THE SMOKE DETECTOR SHALL BE OF SUFFICIENT SENSITIVITY FOR ELEVATOR RECALL AS DEFINED IN NFPA. THE HEAT DETECTOR SHALL BE RATED TO OPERATE AT A TEMPERATURE LOWER THAN THE SPRINKLER HEAD, ALLOWING THE ELEVATOR MAIN POWER SUPPLY TO SHUTDOWN PRIOR TO THE DISCHARGE OF WATER FROM THE SPRINKLER HEAD.

1. PROVIDE A FIRE ALARM SYSTEM SMOKE DETECTOR FOR ELEVATOR RECALL ADJACENT TO THE HOISTWAY SPRINKLER HEAD AT THE TOP OF THE HOISTWAY PER NFPA 72 PART 3-8.14.
2. PROVIDE A FIRE ALARM SYSTEM HEAT DETECTOR DEDICATED FOR ELEVATOR MAIN POWER SUPPLY SHUTDOWN PER NFPA 72 PART 3-8.15, PROPERLY LOCATED IN THE FOLLOWING AREAS:
   A. TOP OF HOISTWAY SPRINKLER HEAD
   B. ELEVATOR MACHINE ROOM/MACHINERY SPACE
3. PROVIDE A MEANS OF AUTOMATICALLY DISCONNECTING THE ELEVATOR MAIN POWER SUPPLY VIA THE BUILDING FIRE ALARM SYSTEM OR SUPERVISORY ALARM SYSTEM CONTROL PANEL UPON ACTIVATION OF A HOISTWAY/MACHINE ROOM/MACHINERY SPACE HEAT DETECTOR PER THE "ELEVATOR MAIN POWER SUPPLY SHUTDOWN BLOCK DIAGRAM" BELOW. NO PROVISIONS FOR AUTOMATICALLY RESTORING POWER TO THE ELEVATOR MAIN POWER SUPPLY SHALL BE MADE. POWER SHALL BE MANUALLY RESET AFTER SHUTDOWN.

ELEVATOR OPERATION UNDER FIRE CONDITION:

UNDER FIRE CONDITION-ELEVATOR EMERGENCY OPERATION SHALL BE AS FOLLOWS:

A. ELEVATOR SHAFT SMOKE DETECTORS SHALL ACTIVATE RECALL OF ALL ELEVATORS WITHIN SHAFT, SOUND GENERAL ALARM, ANNUNCIATE APPROPRIATE LAMPS AT ANNUNCIATOR PANELS, AND INITIATE FIREFIGHTERS SERVICE VISUAL SIGNAL ("FIREMAN'S HAT") PER ASME A17.1.

B. ELEVATOR MACHINE ROOM SMOKE DETECTOR SHALL ACTIVATE RECALL OF ALL ELEVATORS SERVED BY THAT MACHINE ROOM, SOUND GENERAL ALARM, ANNUNCIATE APPROPRIATE LAMPS AT ANNUNCIATOR PANEL, AND INITIATE FIREFIGHTERS SERVICE VISUAL SIGNAL ("FIREMAN'S HAT") PER ASME A17.1.

C. ELEVATOR SHAFT HEAT DETECTORS SHALL DISCONNECT POWER TO ALL ELEVATOR MOTORS WITHIN THAT SHAFT AND ANNUNCIATE TROUBLE AT ANNUNCIATOR PANELS.

D. ELEVATOR MACHINE ROOM HEAT DETECTORS SHALL DISCONNECT POWER TO ALL ELEVATORS SERVED BY THAT MACHINE ROOM AND ANNUNCIATE TROUBLE AT ANNUNCIATOR PANELS.

E. ELEVATOR MACHINE ROOM SPRINKLER FLOW SWITCH SHALL SOUND GENERAL ALARM AND ANNUNCIATE APPROPRIATE LAMPS AT ANNUNCIATOR PANELS.

F. HEAT DETECTORS ASSOCIATED WITH THE ANSI 17.1 ELEVATOR SHUNT TRIP ARRANGEMENT SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM.

PROVIDE A BUSSMAN "POWER MODULE SWITCH" IN A SINGLE NEMA ENCLOSURE WITH ALL NECESSARY RELAY(S), CONTROL TRANSFORMER AND OTHER OPTIONS (AS LISTED BELOW), AND AS SHOWN ON DRAWINGS. THE POWER MODULE SWITCH SHALL BE CONSTRUCTED, LISTED, AND CERTIFIED TO THE FOLLOWING STANDARDS: NEC, ANSI/ASME A17.1 102.24, BOCA 3006.2.3. THE POWER MODULE SWITCH SHALL HAVE AN AMPERE RATING AS SHOWN ON THE CONTRACT DRAWINGS, AND SHALL INCLUDE A HORSEPOWER RATED FUSIBLE SWITCH WITH SHUNT TRIP CAPABILITIES. THE AMPERE RATING OF THE SWITCH SHALL BE BASED UPON ELEVATOR MANUFACTURER REQUIREMENTS AND UTILIZE CLASS J FUSES (PROVIDED SEPARATELY). IT SHALL INCLUDE AS AN ACCESSORY, A 100VA CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY FUSES. THE PRIMARY VOLTAGE RATING SHALL BE 208 VOLTS WITH A 120 VOLT SECONDARY. IT SHALL ALSO CONTAIN AN ISOLATION RELAY (3PDT, 10 AMP, 120V). THE COIL OF THE ISOLATION RELAY SHALL BE 120VAC. A 5 AMP NORMALLY OPEN DRY CONTACT SHALL BE PROVIDED BY THE FIRE ALARM SAFETY SYSTEM TO ENERGIZE THE ISOLATION RELAY AND ACTIVATE THE SHUNT TRIP SOLENOID (140VA INRUSH AT 120V). (NOTE: IF 24V DC COIL IS SELECTED, A SEPARATE 24V DC SOURCE AND CONTACT MUST BE PROVIDED BY THE FIRE ALARM SAFETY SYSTEM).

THE MODULE SHALL CONTAIN THE FOLLOWING OPTIONS:
KEY TO TEST SWITCH
"ON" PILOT LIGHT (RED)
ISOLATED FULL CAPACITY NEUTRAL LUG
2 NO/2 NC MECHANICAL INTERLOCK (REQUIRED FOR HYDRAULIC ELEVATORS WITH AUTOMATIC RECALL)
NEMA 1 ENCLOSURE

THE MODULE SHALL HAVE BEEN SUCCESSFULLY TESTED TO A SHORT CIRCUIT RATING WITH BUSSMANN LOW-PEAK CLASS J FUSES AT 200,000 AMPS RMS SYMMETRICAL. ALL SWITCHES SHALL HAVE SHUNT TRIP CAPABILITIES AT 120V AC FROM A REMOTE FIRE SAFETY SIGNAL. BRANCH FEEDERS SHALL BE SELECTIVELY COORDINATED AND FED WITH AN UPSTREAM SUPPLY OVERCURRENT PROTECTIVE DEVICE AT A MINIMUM OF 2:1 SIZE RATIO UTILIZING LOW-PEAK (CLASS J, RK1 OR L) FUSES.

ELEVATOR ELECTRICAL REQUIREMENTS

GENERAL REQUIREMENTS:

THE E.C. SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED FOR A COMPLETE INSTALLATION OF THE ELEVATOR(S) ELECTRICAL EQUIPMENT PER NEC ARTICLE 620, ASME A17.1 ELEVATOR CODE, NFPA 72 & ALL APPLICABLE FEDERAL, STATE & LOCAL CODES. ELECTRICAL DEVICE & EQUIPMENT LOCATIONS & REQUIREMENTS SHALL BE VERIFIED WITH THE ELEVATOR EQUIPMENT MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN OR PLACING FINAL PURCHASE ORDERS FOR ANY ELECTRICAL DEVICES, EQUIPMENT, ETC.

1. PROVIDE A SEPARATE BRANCH CIRCUIT FOR CAR LIGHTS, RECEPTACLE(S), AUXILIARY LIGHTING POWER SOURCE & VENTILATION FOR EACH ELEVATOR CAR, VIA A 30A-2P LOCKABLE DISCONNECT SWITCH WITH (1) 20A FUSE. MOUNT THE DISCONNECT SWITCH(ES) IN THE ELEVATOR MACHINE ROOM/MACHINERY SPACE PER NEC & MANUFACTURER'S REQUIREMENTS.
2. PROVIDE A SEPARATE BRANCH CIRCUIT FOR THE MACHINE ROOM/MACHINERY SPACE LIGHTING & RECEPTACLES. PROVIDE A WALL MOUNTED TOGGLE STYLE 120VAC, 20A WALL SWITCH TO CONTROL THE LIGHTING AT THE POINT OF ENTRY TO THE MACHINE ROOM/MACHINERY SPACE. PROVIDE A MINIMUM OF ONE(1) 120VAC, 20A, 1□ GFCI TYPE DUPLEX RECEPTACLE IN EACH MACHINE ROOM/MACHINERY SPACE. PROVIDE A MINIMUM OF ONE(1) 120VAC, 20A, 1□ GFCI TYPE DUPLEX RECEPTACLE FOR THE TOP OF EACH ELEVATOR CAR, UNLESS PROVIDED WITH THE ELEVATOR.
3. PROVIDE A SEPARATE BRANCH CIRCUIT TO SUPPLY THE HOISTWAY PIT LIGHTING & RECEPTACLE. PROVIDE A MINIMUM OF ONE(1) 120VAC, 20A 10 GFCI TYPE DUPLEX RECEPTACLE IN THE HOISTWAY PIT. PROVIDE A WALL MOUNTED 120VAC, 20A WALL SWITCH LOCATED SO AS TO BE READILY ACCESSIBLE FROM THE PIT ACCESS DOOR FOR HOISTWAY PIT LIGHTING. SEE LIGHTING PLANS AND LIGHTING FIXTURE SCHEDULE FOR LIGHT FIXTURE TYPE. REQUIRED LIGHTING SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE GROUND FAULT CIRCUIT INTERRUPTER. (SEE POWER PLANS)
4. PROVIDE A LOCKABLE MEANS OF DISCONNECT IN THE MACHINE ROOM/MACHINERY SPACE FOR THE MAIN POWER SUPPLY TO THE ELEVATOR CONTROLLER. THE MEANS OF DISCONNECT SHALL BE SIZED PER THE ELEVATOR MANUFACTURER'S REQUIREMENTS & SHALL BE LOCATED WHERE IT IS READILY ACCESSIBLE TO QUALIFIED PERSONS, NEAR THE JAMB SIDE OF THE MACHINE ROOM/MACHINERY SPACE DOOR.
5. PROVIDE A DOUBLE-GANG DEEP JUNCTION BOX WITH SINGLE GANG PLASTER RING MOUNTED AT 48" AFF WITH A 3/4"C. CONDUIT WITH PULLWIRE STUBBED INTO THE NEAREST ACCESSIBLE CEILING SPACE FOR A TELEPHONE CONNECTION BY OTHERS. FIELD LOCATE THE EXACT ROUGH-IN LOCATION WITHIN THE MACHINE ROOM/MACHINERY SPACE & COORDINATE WITH OTHER EQUIPMENT LOCATIONS.
6. PROVIDE FIRE ALARM SYSTEM SMOKE DETECTORS DEDICATED FOR ELEVATOR RECALL PER NFPA 72 PART 3-8.14, PROPERLY LOCATED IN THE FOLLOWING AREAS:
   A. ELEVATOR LOBBY (EACH FLOOR)
   B. ELEVATOR MACHINE ROOM/MACHINERY SPACE
   EACH SMOKE DETECTOR DEDICATED FOR ELEVATOR RECALL SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM OR DEDICATED SUPERVISORY ALARM SYSTEM CONTROL PANEL.

NORTH

FULLY SPRINKLERED BID DOCUMENTS

Revisions:	Date

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Approved: Project Director

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Location: 1400 Blackhorse Hill Road Coatesville, PA 19320

Date	Checked	Drawn
05 / 12 / 14	JJD	JMZ

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